

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number
WO 2005/000934 A1

(51) International Patent Classification⁷: **C08G 18/36**, 18/42, 18/66, D06N 7/00

(21) International Application Number:
PCT/US2004/016981

(22) International Filing Date: 28 May 2004 (28.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/478,681 13 June 2003 (13.06.2003) US

(71) Applicant (for all designated States except US): **DOW GLOBAL TECHNOLOGIES INC** [US/US]; Washington Street, 1790 Building, Midland, MI 48674 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **JENKINES, Randall, C.** [US/US]; 1927 Canterbury Lane, Dalton, GA 30720 (US). **MOBLEY, Larry, W.** [US/US]; 4404 Hon-
eysuckle Lane, Cohutta, GA 30710 (US). **KOONCE, William, A.** [US/US]; 3510 Paigewood Drive, Pearland, TX 77584 (US).

(74) Agent: **NILSEN, Kevin, J.**; The Dow Chemical Company, P.O. Box 1967, Midland, MI 48641-1967 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HIGH PERFORMANCE POLYURETHANE CARPET BACKINGS CONTAINING MODIFIED VEGETABLE OIL POLYOLS

(57) Abstract: Carpet backing for residential, commercial and recreational carpet which exhibits a tuftbind greater than 4.5 kg, ASTM D 1335, contains a polyurethane reaction product of a polyisocyanate; an active hydrogen containing compound; and a polyol reaction product. Typically, the polyol reaction product is a reaction product of a polyol and a vegetable oil and contains less than about 50 percent by weight of unreacted vegetable oil. The vegetable oil is preferably selected from palm oil, safflower oil, canola oil, soy oil, cottonseed oil and rapeseed oil. In a preferred embodiment, the vegetable oil is blown. Typically, the amount of unreacted vegetable oil in the polyol reaction product is less than about 34 weight percent. The hard segment of the resulting polyurethane reaction product constitutes at least 20 weight percent of the polyurethane reaction product. The carpet backing of the invention may be used as a precoat, a laminate or foam coating.

WO 2005/000934 A1